REMARKS

The Office Action dated May 27, 2003 has been fully considered. Claims 1-69 are pending in this application.

In paragraph 2 on page 2 of the Office Action, claims 1-69 were rejected under 35 U.S.C. § 103(a) over Haaland (U.S. Patent Pub. No. 2002/0059047) in view of Obremski (U.S. Patent No. 5,498,875) and in further view of Gupta (U.S. Patent No. 5,319,586).

To establish a *prima facie* case for rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art and evidence of motivation to combine prior art teachings must be presented. *See*, MPEP §§ 2143.03 and 2143.01 respectively. In this instance, as described below, neither of the requirements is present and a *prima facie* rejection fails under 35 U.S.C. § 103(a), and thus Applicants respectfully traverse the rejection.

With respect to rejected claims 1-69 Applicants respectfully traverse the Section 103(a) rejection. Applicants respectfully submit that Haaland fails to disclose, teach or suggest all elements of the claim. Applicants' invention, as recited in the independent claims, requires "transforming a plurality of sequential spectra obtained from a spectrometer to provide an array of drift-compensated row vectors" to compensating a set of spectra measurements for the effects of spectral drift. Thus, Applicants' invention addresses drift caused a spectral shift or a translation of the spectrum from data samples. For example, the drift may be induced by charging of underlying layers of a structure being analyzed via a spectrometer. Thus, the spectra data obtain in Applicants' invention are adjusted to account for drift in the data itself.

In contrast, Haaland is directed to adjustment of calibration for a spectrometer. Haaland discloses a calibration technique wherein a spectral shape associated with a source of variation that was not present in the original calibration mode is added to a prediction model to form a hybrid calibration model. This method adds un-modeled components or other spectral information to multivariate models to maintain a calibration on a drifting spectrometer. Thus, Haaland does not teach "transforming sequential spectra obtained from a spectrometer to provide an array of drift-compensated row vectors." Rather, Haaland is interested in calibrating a spectrometer and not the adjustment of spectra data for drift, which may, for example, result from charging of underlying layers of the structure being analyzed via the spectrometer.

In addition, because Haaland does not suggest transforming a plurality of sequential spectra obtained from a spectrometer to provide an array of drift-compensated row vectors, Haaland cannot suggest performing a factor analysis on the array of row vectors (i.e., drift-compensated row vectors) to provide a set of principal factors compensated for effects of drift. Moreover, because Haaland does not suggest transforming a plurality of sequential spectra obtained from a spectrometer to provide an array of drift-compensated row vectors and does not suggest performing a factor analysis on the array of row vectors (i.e., drift-compensated row vectors) to provide a set of principal factors compensated for effects of drift, Haaland cannot suggest generating compositional profiles compensated for the effects of drift from the set of principal factors.

Obremski fails to remedy the deficiencies of Haaland. Obremski focuses on a method for determining analyte content of a sample using techniques such as target factor analysis. Nowhere in Obremski is the subject of transforming sequential spectra or drift mentioned. Thus, Obremski also does not teach "transforming sequential spectra obtained from a spectrometer to provide an array of drift-compensated row vectors." The Section 103(a) rejection based on Haaland in view of Obremski is improper because combination of the references do not teach, disclose or suggest the first element of Applicants' claim and therefore should be withdrawn. Moreover, for the reason stated above, Obremski cannot teach performing a factor analysis on the array of row vectors (i.e., drift-compensated row vectors) to provide a set of principal factors compensated for effects of drift or generating compositional profiles compensated for the effects of drift from the set of principal factors.

Dependent claims 2-16, 18-30, 32-51, 53-66 and 68 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims. Further, dependent claims 2-16, 18-30, 32-51, 53-66 and 68 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-16, 18-30, 32-51, 53-66 and 68 are patentable over the cited patent.

Moreover, Applicants respectfully traverse the Section 103(a) rejections because the Office Action fails to present any evidence that one skilled in the art would be motivated to

4

Application No. 10/077,036
Amendment dated September 29, 2003
Reply to Office Action of May 27, 2003

combine the cited Haaland, Obremski and Gupta references. A Section 103(a) rejection can only be established by combining cited references to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *See*, MPEP § 2143.01. The Office Action alleges various teachings in the Haaland, Obremski and Gupta references without citing any evidence in the Haaland, Obremski or Gupta reference that one skilled in the art would combine the alleged teachings to achieve Applicant's claimed invention. Absent any support, the Office Action expresses the conclusory opinion that the references are combinable.

Applicants submit that all claims are in condition for allowance.

Applicants have attached replacement figures in compliance with § 1.84 in order to clarify the title of Applicants' application.

Please accept Applicants' enclosed Petition for Extension of Time.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicants, David W. Lynch, at 651-686-6633 Ext. 116.
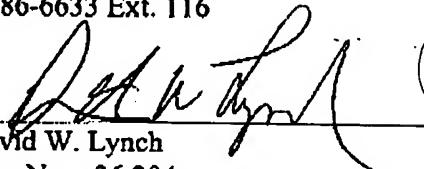
Respectfully submitted,

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5